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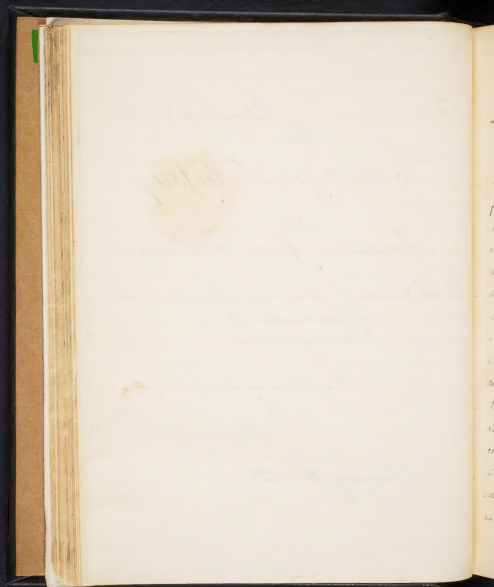
Inaugural Essay

On
Aneurism from Anastomosis

In the Degree of Doctor of Medicine in the
University of
Pennsylvania.

By Charles W. Johnson
of
Maryland.

January 2^d 1828.

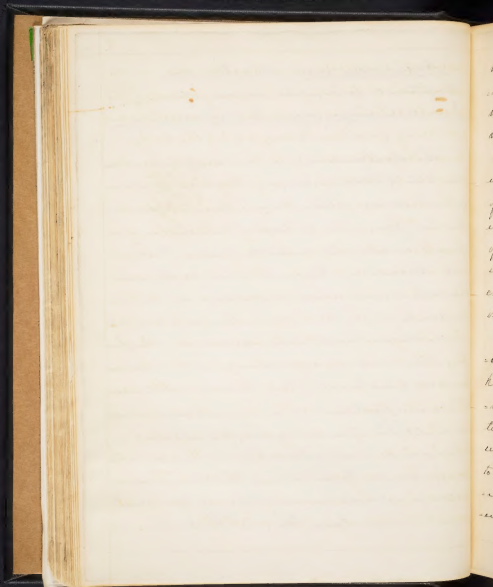


Aneurism from Anastomosis.

Confiteri; si quid prodierit delicta, fateri.

I grant the charge; forgive the fault, confessed.

The disease which is now recognised under the title of Aneurism from Anastomosis, appears from Medical history, to have been observed by the Surgeons of the earliest times. There are many cases on record, under the head of "Bloody and Anomalous tumours;" which as they prove that the disease was not more rare among the ancients than it is at the present day, likewise show their entire ignorance of its structure, true nature, and consequently the proper method of treatment. — This obscurity continued to be undiminished for many ages, and it was not until the time of Mr. John Bell that any certain and lucid account of this disease made its appearance. To his labours, the science is indebted for a correct demonstration of its character as also the means of cure. He gave to it the —



name of "Aneurism from anastomosis," in consideration of its being a tumour formed of the minute arteries, accompanied by pulsation and not being peculiar to any part of the body.

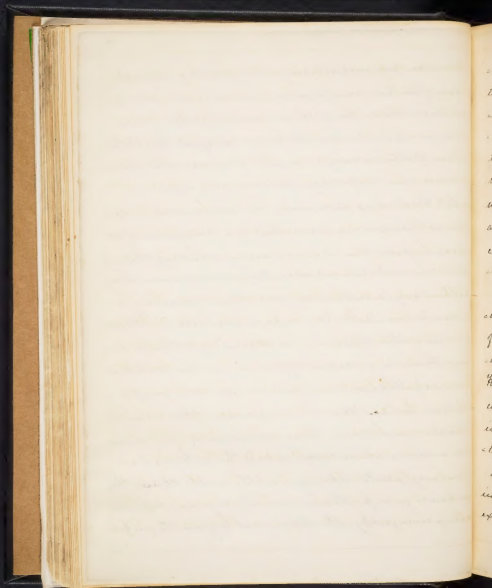
Since the publication of ~~it~~ his views, it has been uniformly adopted as one of that class of ^{the} diseases of the arteries, called Aneurismos. — Mr. Bell in his "Principles of Surgery," has spoken of an operation, at which he was present, which would lead us to infer, that its aneurismal character was suspected; even prior to the observations, he subsequently instituted.

The Surgeon in that case under the belief that he was operating on the known kind of aneurism, cut through the centre of the tumour to the bone, that he might tie the principle artery or arteries, from which it derived its support. It is needless to add, he was foiled, and that he ^{was} embarrassed by a hemorrhage from all quarters, which scarcely proved controllable.



This case demonstrates very clearly that a definite idea of its true complexion, was not entertained at that time. And it is now a matter of surprise, how it should have escaped the detection of the many accurate observers, who have graced our Profession for so many ages. —

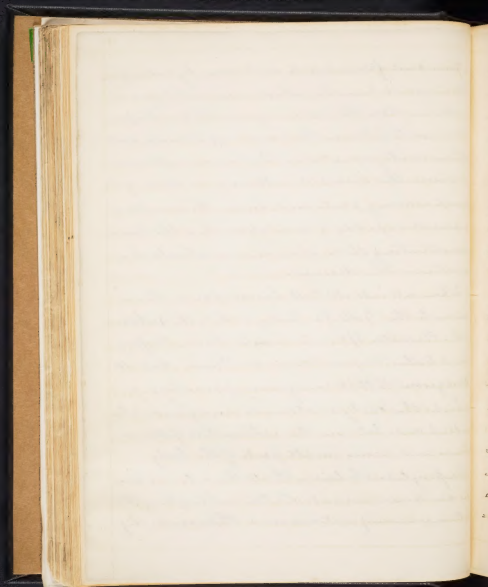
Mr. Bell has described the aneurism from Anastomosis, as consisting of a congeries of arterial vessels, sometimes barely piercing through cellular substance, sometimes communicating with larger cells, and sometimes forming around remarkable sacs or cavities in the centre of the tumour, containing either a coagulum or a serous effusion. — The cutaneous capillaries are first found to be implicated, when the skin assumes this tumorous condition. These commence an increased action, which soon draws the arteries of adjoining parts into sympathy with those of the central group, thus nourished from behind, act powerfully; the tumour begins its pulse



tions, and forms vessels as its use, by enlarging
 those small branches, which were not before vi-
 sible. — Now the same sympathetic disposi-
 tion exists between the venous capillaries, and
 their contiguous veins, that is maintained
 between the diseased arteries and those of the
 neighbouring parts, and hence, the results, of
 a forced rapidity of circulation thro' the tumour
 constituting those phenomena which cha-
 racterise the disease. —

When cut into, Mr. Bell has compared this tu-
 mour to the "Gills of a turkey cock, or the substance
 of the Placenta, Spleen, or Uterus." Baron Dupuy-
 tren to the "Corpora Carumosa Penis." And Mr.
 Hodgesson "to that imaginary parenchyma,
 which the early anatomists imagined to be
 interposed between the extremities of the ar-
 teries and veins in all parts of the body."

Dupuytren believes that the arteries are
 in an aneurismal state, entangling their
 extreme ramifications in a thousand dif-



frequent ways. And this we believe to be their con-
 dition; and now that this condition, is the con-
 sequence of an inflammation of the coats of the vessels
 themselves. We know that what is called an
 aneurismal diathesis, is understood to signify,
 an inflammatory predisposition of the arterial he-
 generally, which becomes concentrated in cer-
 tain points, by means not yet satisfactorily explai-
 ned. Now here in the first place we have a defect
 or derangement of the extreme vessels in effect
 of nature's remedy, this disorder, produces inflama-
 tion, which failing to restore the proper equi-
 librium, the centist becomes more violent, and
 an aneurismal state supervenes. Again all
 those agents which are found to affect a part
 in a state of inflammation, are observed to exert
 a similar power over the aneurismal from aneu-
 rismosis. At inflammation attends the after sta-
 ges of the aneurism, we have the most conclusive
 evidence, in the indications which invariably oc-
 -cur, if the disease be permitted to run on.



Mr. Bell has stated that the p. to advising are drawn into a sympathetic consent with the diseased group of primary vessels and in submissiveness to his authority, and the accepted views of the Professors. I have several times employed the same language, tho' I should much prefer ascertaining what he has given to sympathy to the continuous inflammation, as a cause in every way adequate to the effect.

The Anemiosis being established, is marked by the following signs. - Its first appearance is that of a small speck or pimple, with scarce any discoloration of the skin; Its growth is slow, but uncontrollable; at first it is only a kind of indistinct, and tumbling knob, such as is distinguished in humoral taints. But

when the humors are fully formed, to produce one or more regular, distinct, and continuous.

Every occasional exertion of body and mind causes it to beat more violently. In Spring & Summer, particularly the former the circular



tion being more enlarged, it becomes larger, with a fuller and stronger pulsation. During the periods of menstruation it beats powerfully; and by this incessant pulsation, and occasional turgescences, it pours among the cellular substance, or among the dilated veins sacs of blood. These little sacs, form apices and nodules, which become harder, and very tumescence and burst from time to time; until this aneurism, like other aneurisms, pours out its blood so profusely, as to reduce the patient to extreme weakness.

To Mr. Bell I am indebted for this very accurate account of the growth and progress of this disease, being assured that now, I could furnish, would be more elegant, lucid or concise.

It will be seen, from the foregoing description of this disease, that its marks are so distinctive, as always from a knowledge of them, to enable us to recognise it under all circumstances. And yet this tumour, is not infrequently called



led *Nervus Maturus*, by some of our most enlightened Surgeons, even of the present day. But that they have confused the two together, is abundantly evident from fact. The one being a true *Nervus* the other a true *neurisma* from *Anastomosis*. It is possible, (and indeed we shall demonstrate it among the causes) for this disease to grow out of a *Nervus Maturus*, but when it assumes the *Aneurismal* form, it is no longer continuous to be a *Nervus*, it ~~loses~~ loses both its name and nature. — I have said that the various states of body and mind, rest and motion, have a direct and immediate effect on this *Nervus*. Thus the exercise of walking, running, leaping, riding, &c, always cause it to pulsate quickly and strongly. Stimulant food and drink have a similar ^{direct} energy, fright, anger, crying, in fact any thing that quickens the circulation, will increase its turgescence, with a far more powerful pulsation.

Pain is not experienced at first, but most



commonly accompanies the latter stages of the disease. The singular connection which is found after times to exist between this disease, and the catamenial discharge, deserves consideration. Of the fact there can be no doubt, and we have now a striking example of that extensive sympathy between the uterus and all parts of the body. During menstruation as has been observed, it beats powerfully, bursts and bleeds copiously, sometimes however not sensibly affecting the quantity of the secretion. But again it not only diminishes it but even in some cases stops it altogether, assuming to itself a mercurious office. It opposes the due development of the genital organs and mammae at their proper time. M. Bell has recorded a case where the menstrual evacuation was completely superseded, and the evidences of puberty withheld as a late date. Van Helmont has declared, "Propter vim uterini menstrui, id quod est. And with some limitations, the aphorism is



correct. We define the nature of its functions, & the diseases will be felt in all its consequences. Among the causes of this Anæmia may be enumerated. Congenital marks or defects of the skin, contusions, pruritus, &c. The putting of a pimple, will cause it to degenerate into this form of disease. A febrile state of the system has been known to produce it. (vide Mr. Bell's case of Anæmia from anastomosis of the Rectum in Vol. 1. of his Principles of Surgery.) There are other causes of which we cannot speak so certainly, as of the above. This Anæmia is not peculiar to any part of the body. It has been situated on the head, face, superior and inferior extremities, on the Buttocks, and in the Rectum. Tho' the head and face on account of their greater vascularity, and exposure to the common causes mentioned above, are most liable to it.



Treatment.

The records of Surgery, furnish but one case, when the entire removal of the tumour had been effected by a spontaneous cure. The case occurred in the practice of my former Preceptor Dr. White. I have Bradley Tyler of Maryland. I had it in view, when I selected Anomalous from an anomalous as the Subject of an Inaugural Essay. And did hope, to have given an interesting detail of it, but regret to say, there is nothing save the spontaneous cure, of any peculiar interest. As an anomaly in Surgical history, it is worthy of consideration. I shall give, therefore, such a history of the case, as the politeness of Dr. Tyler has permitted me, which must necessarily be in some degree imperfect, owing to the lapse of time since its occurrence. "The state that it, proceeded from a congenital mark, was seated principally on the left Parotid glands. Spreading however partially over the angle of the Inferior Maxillary bone and involving the whole lobe of the ear. Leaving the



first months of infancy, it was an uniform, slight pink spot, rendered more conspicuous when contrasted with the clear, healthy complexion of the surrounding surface. The temperature of the part was sensibly elevated, and its pulsations, tho' indistinct at first, became stronger and more decided, as the child grew. It continued to increase till the patient was about eighteen months old, when she had an attack of Fever, during the exacerbations of which, the temperature, heat and pulsations were manifestly increased. At this time a superficial ulcer formed over the whole surface of the tumour. (Which was never attended however by any change.) The discharge from this ulcer was very great, and as regards consistency colour and other sensible properties, was analogous to the fluid known to form pus, just described, and excited by the accumulation of purifiable matter resulting from neglected attention in infants. — The appearance of the tumour during this ulceration



was of course changed and even if it were assumed its numerical aspect as it is now regarded, and the matter of the child returned the growth of the aneurism was evidently checked, its quadratic dimensions and finally a spontaneous cure was effected.

Dr. Hyle is disposed to attribute the removal of the tumour to the ulceration. But if it be permitted to differ from so high an authority, and the Pathology above suggested be admitted, the cure may be ascribed to an agent no less effective.

For let it be remembered that the ulceration as compared to the cuticle, that immediately at no time accompanied it, and consequently, if it could not have reached the vessels themselves and we are instantly convinced that it may be attributed to another cause, with all most usual propriety. Had the ulcer penetrated into the diseased mass had it eaten out and seen the enlarged vessels, then there would have been healthy granulations to repair the disorganization



we should have had new, and undecipherable, not altogether a new structure. But the absence of all hemorrhagic process, that this did not take place. And we must look to something else for an explanation of this phenomenon.

Now if it is recalled that the child is seized under an attack of fever at the same time, which must have exercised the most powerful influence over the general system, making down all other invalid associations, and opening to itself, the whole frame, as it were, we have a solution of the difficulty.

If the aphorism of Mr John Hunter be admitted, "that no two stimulants can exist simultaneously, in the same system." It would say that the stimulus of the topical affections, being withdrawn by the general excitement, the recuperative powers of nature overcome the inflammatory state of the minute vessels, and healthful reaction took place.

It's medical or surgical treatment whatever



is preferred in this case, except it may
have been interposed medicines administered
to the person.

There are three modes of operating on this
disease, as recommended by Surgeons of the pre-
sent day. 1st By Trepan, by Venesection,
the Arteries & Intestines supplying the Tumor,
and by Excisions.

Of the first we shall say not a little. Enten-
taining the views of the Pathology of this form
of tumours that we do, our approval cannot
be extended of any treatment which is either
irritating in itself or its consequences. It has
however been tried and in some instances with
the happiest effect, but in many more it has
failed, leading to the aggravations of the disease.
When the tumour is situated on a superficial
part, so that, firm and continued pressure
could be made. It would no doubt cause its
removal, if applied with the same efficiency, but



it is only under such circumstances, that it
can be recommended. In all other cases it
has uniformly, been found to do mischief.

If the Second method was generally used
in all cases and may seem agreeable, it
can be resorted to with security, in the pa-
tient or credit to the surgeon in such cases
at times, can be so situated, as to be only
the work of the other means, in some it
may be that we can attempt it is out of
the supply of blood and supply. I found
sometimes it is a great deal. The first
first indication the patient is in motion
a woman with a eye was found, and the
woman, however, from which it was, it
at the moment of the first called out in
a voice which, Mr. Thomas immediately
remained to secure the woman in the bed
to some side and according to the
method of it. The effect was instantly ex-
perienced by the patient, the tension gradually



ally subverted and in two years after the operation scarce any vestige of it remained. The proper position was unaffected by displacement & distortion which if it had been permanent, no doubt would have accelerated it.

M. Dalrymple has likewise performed a similar operation, and I believe with like success. These cases may be considered as instances in which a young practitioner, in such a case.

The patient was also a woman. The uterine tumour was situated behind the bladder, and in the socket, the uterus was enlarged and the fundus was the consequence. Her suffering was great and the operation being performed by two gentlemen, performed the bold necessity of turning the tumour backwards and forwards. The operation was completed in the usual manner, and the patient was shortly dismissed. The uterus returned to its position and the bladder was not injured.



forest. It is now time to do a further course
 and attempt. I did not learn that there was
 any more from missionaries, but as I have
 now been twice to the Government and
 returned in the same manner it may not
 be useful to mention it. There was should
 be a new in mind as they ^{may} often interfere with the
 local operations of civilization. But one
 But it may be imagined if they would be
 led to combating the ~~same~~ this because
 that it is always the end result of civilization.
 According to our own views I am not sure
 not succeed. The American committee is also
 different and is a permanent, as also it is the
 courage upon the attempt. I was recently
 invited to advance upon the first one it was
 against the disease. When the complete
 and entire mind. In our own minds
 it is to be done in a more complete manner
 a national one. To the question of reform
 it is to be done in a more complete manner
 and there is no doubt that it is



operation, is not done in vain. It is
 a ~~very~~ ^{very} dangerous

Mr. Bell has particularly agreed it that we
 must not do so. But into this humor we
 cut it out. Should the surgeon instead of
 making no incision around the disease the
 the matter is putting the knife around
 the enlarged vessel he will find ^{himself} embar-
 rassed by a hemorrhage, so copious, that if
 not speedily controlled, may leave his pa-

tient a corpse under his hands. It is as if
 the incision be made of every diseased vessel,
 the bleeding will be little or nothing, and you
 without will be a very common period of
 operation. Some would insist on the
 state of the patient at the time of operation. It
 will therefore be right to know the
 system by which that vessel is affected. It is
 not that the vessel will not be in ad-
 vance in the same way; during the
 operation but chiefly so in the subsequent



[illegible]

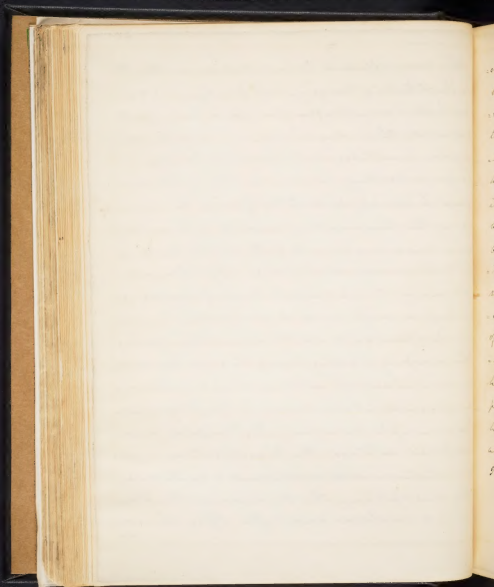
Dr. Gibson has recommended a plan of
operation, viz. the refusal of contentious parties
to become sympathizers with enlarged and
increased, which is desirous to meet re-
spectful mentions both as to discover the
decision of that gentleman and as a more
effective means of combating a dreadful disease.



The case alluded to is detailed in the Br.
-s Institutes of Surgery - Vol 2 - pages 153 & 4 -
to which I must refer you for a more full
account, than my limits will enable me
to give. — Elizabeth Laus has having a
large pulsating tumour on the right side
of her head, applied to Dr. Gibson. On examin-
ing the tumour, he found it to be not only
of an enormous size, but the vessels leading
to it very numerous and greatly enlarged.

Deeming it madness to think of removing
so large a mass, in such a condition, by a sin-
gle operation, and at the same time seeing
the necessity of acting promptly and decidedly,
he determined to institute several instead of
one operation. Accordingly, he first secured
the principal branches of the Temporal and
occipital arteries. An Erysipilatorous eruption
on which ensued, occasioned a weeks delay,
this disappearing, the Dr. pursued the plan
he had adopted, and after three operations

- one



ous (meaning the vessels as he divided them) had the ratio ^{to nature} factious completely and radically, the whole diseased map. In due time the wound healed up, the patient recovered his health, and no return of the disease has since manifested itself. — Dr. Gilson is convinced that tying the Carotids, would have had no good effect in this case, the Anastomosis was too extensive and well established, to have been much affected by such an expedient. — As this paper will necessarily meet Dr. Gilson's eye, both as Professor of Surgery and my private preceptor, I am restrained from rendering that tribute, to which he is entitled for this as well as many other practical lessons in Surgery. The Professors however have a just sense of his merits — and will under that which with propriety I cannot. —

— Yours. —

